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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,474	06/14/2006	Pavel Pekarski	DE030430	7013
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EXAMINER LE, TUNG X				
ART UNIT 2821		PAPER NUMBER		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/596,474

**Applicant(s)**

PEKARSKI ET AL.

**Examiner**

TUNG X. LE

**Art Unit**

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on amendment submitted on 12/29/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 and 18-22 is/are pending in the application.
- 4a) Of the above claim(s) 20-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 12-16 is/are rejected.
- 7) ☒ Claim(s) 8-11 and 18-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This Office Action is in response to the Applicants' amendment submitted on December 29, 2008. In virtue of this amendment:

- Claim 17 is cancelled;
- Claims 18-22 are newly added; and
- Thus, claims 1-16 and 18-22 are now pending in the instant application.

### *Election/Restrictions*

1. Newly submitted claims 20-22 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

This application contains claims directed to the following patentably distinct species: **species 1** – Figure 8 (corresponding to claims 1-16 and 18-19); and **species 2** – Figure 10 (corresponding to claims 20-22).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 20-22 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3, 6-7 and 12-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Sun et al. (U.S. Publication No. 2004/0183463 A1 of record).

With respect to claim 1, Sun discloses in figures 1-2 a method of operating a discharge lamp [Lamp 2], in a first mode (having a starting mode) having a first operating frequency [f1] (see paragraph [0009]), which is activated when a burning voltage (having an igniting/starting/burning voltage) of the lamp is at least as high as a first limit value (paragraphs [0028-0029]), and a second operating mode (having a normal operation mode) with a second operating frequency [f2] that is higher than the first operating frequency (having  $f2 > f1$  and see paragraph [0009]), which is activated when the burning voltage of the lamp is not more than the first limit value (see figure 1, and paragraphs [0028-0029, 0066]).

With respect to claim 3, Sun discloses that the lamp current is superimposed with current pulses in the first mode of operation (see figures 3-4).

With respect to claim 6, Sun discloses that the first limit value lies at a voltage that is approximately 10V higher than a minimum voltage of a lamp driver unit that can still drive the lamp with its rated power or a desired power (paragraph [0020]).

With respect to claim 7, Sun discloses that the first limit value has a hysteresis (see figures 1 and 4).

With respect to claim 12, Sun discloses that the second operating frequency is synchronized with an image frequency of a display system (paragraph [0030]).

With respect to claim 13, Sun discloses in figures 1-2 a circuit arrangement comprising a controller [3-7] that is configured to operate a discharge lamp [LAMP 2] in a first mode (having a starting mode) of operation having a first operating frequency [f1] (see paragraph [0009]), which is activated when a burning voltage (having an igniting/starting/burning voltage) of the lamp is at least as high as a first limit value (paragraphs [0028-0029]), and a second mode (having a normal operation mode) of operation with a second operation frequency [f2] that is higher than the first operating frequency (having  $f2 > f1$  and see paragraph [0009]), which is activated when the burning voltage of the lamp is not more than the first limit value (see figure 1, and paragraphs [0028-0029, 0066]), a comparator [UZCS] for comparing the burning voltage with the first limit value (paragraph [0013]), and a generator [7] for generating the first and second operating frequencies of the lamp current in dependence on an output signal (having an output signal of the comparator to the generator) of the comparator (see figure 1).

With respect to claim 14, Sun discloses that a light unit (figure 1) including the high pressure gas discharge lamp [LAMP2] and the circuit arrangement [Q1-Q4 and 3-7].

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun et al. (U.S. Publication No. 2004/0183463 A1 of record).

With respect to claim 15, Sun discloses all of the claimed limitations, as expressly recite in claims 13-14, except for specifying that a projection system including a projection display and the lighting unit. However, this difference is not of patentable merits since the lighting unit of Sun can be selected to use in a projection system for displaying device. Thus, to apply a gas discharge lamp light unit for a projecting system would have been deemed obvious to a person skilled in the art.

With respect to claim 16, Sun discloses all of the claimed limitations, as expressly recite in claim 1, except for specifying that a computer program with program code stored on a computer readable medium for running the program on the microcontroller. However, this difference is not patentable merits since the microcontroller of Sun being programmable and stored to automatically control the lamp operations. Therefore, to store a program on the microcontroller of Sun for operating the lamp modes would have been deemed obvious to a person skilled in the art.

6. Claims 2 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun et al. (U.S. Publication No. 2004/0183463 A1 of record) in view of Kumagai et al. (U.S. Publication No. 2006/0049777 A1 of record).

With respect to claims 2 and 4-5, Sun discloses all of the claimed limitations, as expressly recited in claim 1, excepted for specifying that the first operating frequency is from 50-200 Hz, the second operating frequency is from 300-1500 Hz, and a factor of the second frequency and the first frequency is 2 to 20. Kumagai inherently discloses

a method of operating a discharge lamp [DL] having a first operating frequency (100Hz to 200Hz) and a second operating frequency [360 KHz] (paragraph [0114]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the controller and the resonant circuit of Sun by setting the relationship between the first and second frequencies having the values therein in order to improve a stable operation in a long life of the lamp since such a configuration of the relationship of the first and second operating frequency for state purpose has been well known in the art as evidenced by the teaching of Kummagai (paragraphs [0023, 0027]).

***Allowable Subject Matter***

7. Claims 8-11 and 18-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for indicating the allowable subject matter of claims 8-11 were provided in the previous office action (claims 18-19 would be allowable as being dependent on claim 8).

***Response to Arguments***

8. Applicant's arguments filed 12/29/2008 have been fully considered but they are not persuasive.

Applicant argue that Sun fails to teach activating a first mode of operation having a first operating frequency when a burning voltage is above a first limit value, and activating a second mode of operation with a second operating frequency when the

burning voltage of the lamp is below the first limit value as claimed in claim 1. Examiner respectfully disagrees as explained below.

As clearly cited above, Sun discloses in figure 1 a lighting system for operating the lamp [LAMP 2] in two different modes (a starting/burning mode and a normal operating mode) with two different frequencies [f1, f2], respectively (see paragraph [0009] in lines 1-5), wherein during the starting or burning mode that the starting or burning voltage is above the first limit value [a predetermined voltage] (see paragraph [0029] in lines 12-16) and during the normal operating mode that the starting or burning voltage is below the first limit value (see paragraph [0028] in lines 4-7).

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.



10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUNG X. LE whose telephone number is (571)272-6010. The examiner can normally be reached on 8:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens can be reached on 571-272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TXL 03/29/2009

/David Hung Vu/  
Primary Examiner, Art Unit 2821\*\*\*